Service Manual

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- 本产品在拆卸、维修的时候，遭受电击或人员受伤的危险性会增高，专业服务人员对这点必须有所了解，并采取必要的预防措施。

- 有些零件的安全功能可能不明显。因此，所替换零件的性能一定要与原有的零件一致。

Preface

This manual contains maintenance procedures for service personnel. It is divided into the following chapters:

1. **General information** contains a general description of the printer and the maintenance approach used to repair it. Special tools and test equipment are listed in this chapter, as well as general environmental and safety instructions.
2. **Diagnostic information** contains an error indicator table, symptom tables, and service checks used to isolate failing field replaceable units (FRUs).
3. **Diagnostic aids** contains tests and checks used to locate or repeat symptoms of printer problems.
4. **Repair information** provides instructions for making printer adjustments and removing and installing FRUs.
5. **Connector locations** uses illustrations to identify the connector locations and test points on the printer.
6. **Preventive maintenance** contains the lubrication specifications and recommendations to prevent problems.
7. **Parts catalog** contains illustrations and part numbers for individual FRUs.

Definitions

CAUTION: A caution identifies something that might cause a servicer harm.

Warning: A warning identifies something that might damage the printer hardware or software.

Note: A note provides additional information.

1. General information

The Lexmark™ X6170 4408-K01/AK1 and X6150 4408-K02/AK2 machines feature an electro-mechanical color scanner, printer, copier, and fax that creates characters and graphics by composing programmed patterns of ink dots using a printhead and liquid ink. The printhead uses small heater plates and nozzles to control ink flow and the formation of characters on the print media. The printhead assembly and ink supply are combined into a single-unit, print cartridge available as a customer replaceable supply item. Dual printheads provide color and true black printing without changing printheads. The number and size of inkjets or nozzles, in the printhead, determines the overall quality and capability of the printer. The black cartridge has a total of 208 nozzles and installs on the left. The color cartridge has a total of 192 nozzles and installs on the right. The printer is capable of printing in two directions from either cartridge.

Power consumption

- 2.55 Watts - Sleep
- 3.107 Watts - Printing
- 6.64 Watts - Idle

Machine types

4408-K01/AK1   4408-K02/AK2
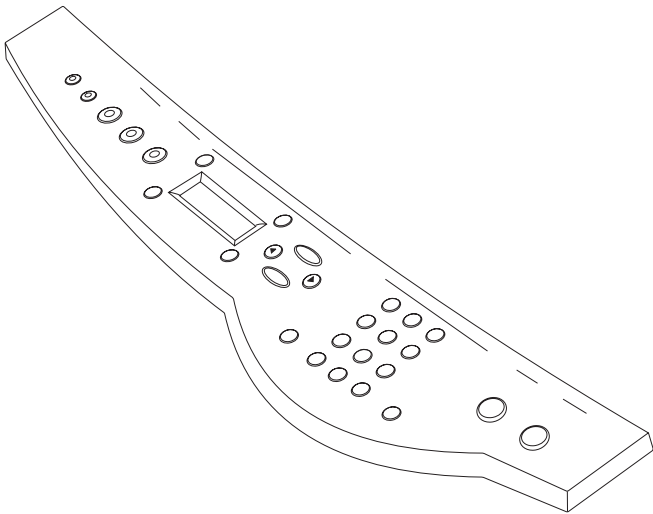
Scanner specifications

Scanner Type	Flatbed, CCD
Scan Modes	**True Color:** 48 Bit Internal (68.7 billion colors) 24 Bit External (16.7 million colors) **Gray Mode:** 12 Bit Internal (4,096 shades of gray) 8 Bit External (256 shades of gray) **Text/Line Art:** 1 Bit Per Pixel
Scan Method	One Pass Scanning
Scan Area	8.5 X 11.7 inches 216 X 292 mm
Scan Resolution	Flatbed Scanning: -Optical: 1200 (H) x 4800 ppi (V) -Interpolated: 19,200 x 19,200 ppi ADF Scanning (4408-K01/AK1) only -Optical: 600 (H) x 300 ppi (V)
Resolution/Quality (Applicable when operating via standalone mode)	Selectable via Contorl Panel -Quick-　　300 x 300 ppi Scan 　　　　　　600 x 300 dpi Print -Normal-　　300 x 600 ppi Scan 　　　　　　600 x 600 dpi Print -Better-　　600 x 600 ppi Scan 　　　　　　600 x 600 dpi Print -Best-　　　600 x 600 ppi Scan 　　　　　　600 x 600 dpi Print Notes: 1) Photo Mode = Best Mode 2) The number of printhead passes will increase with the quality mode.

Resolution/Quality (Applicable when operating via Host)	Selectable via All-In-One GUI for Color/Gray
	-Quick- 75 x 75 ppi Scan
	  600 x 300 dpi Print
	-Normal- 150 x 150 ppi Scan
	  600 x 600 dpi Print
	-Better- 200 x 200 ppi Scan
	  1200 x 1200 dpi Print
	-Best- 300 x 300 ppi Scan
	  2400 x 1200 dpi Print
	
	Selectable via All-In-One GUI for Black Copy
	-Quick- 150 x 150 ppi Scan
	  600 x 300 dpi Print
	-Normal- 300 x 300 ppi Scan
	  600 x 600 dpi Print
	-Better- 600 x 600 ppi Scan
	  1200 x 1200 dpi Print
	-Best- 600 x 1200 ppi Scan
	  2400 x 1200 dpi Print

Control panel

Press:	To:
Number of Copies	Select the number of copies.
Lighter/Darker	Lighten or darken a copy.
Reduce/Enlarge	Make the document smaller or larger.
Left arrow < Right arrow>	Scroll through menu sub-categories.
Options	Scroll through the list of menu headings.
Select	Choose the displayed selection.
Quality	Choose normal, better, best, or quick copy setting.
Color Copy	Make a color copy.

Press:	To:
Black Copy	Make a black and white copy.
Scan	Scan after selecting a Scan To destination.
Stop/Clear	Cancel a scan, print, or copy job, or return to a menu category from a menu sub-category.
Power	Turn the printer on or off.

Maintenance approach

The diagnostic information in this manual leads you to the correct field replaceable unit (FRU) or part. Use the symptom index, service checks, and diagnostic aids to determine the symptom and repair the failure.

After you complete the repair, perform tests as needed to verify the repair.

Abbreviations

B/M	Bill of Material
CCD	Charge Coupled Device
EOF	End of Form
ESD	Electrostatic Discharge
FPC	Flat Printhead Cable
FRU	Field Replaceable Unit
HVPS	High Voltage Power Supply
LCD	Liquid Crystal Display
LVPS	Low Voltage Power Supply
OEM	Original Equipment Manufacturer
V ac	Volts alternating current
V dc	Volts direct current
ZIF	Zero Insertion Force

2. Diagnostic information

Start

Use the symptom tables, service checks, and diagnostic aids in this chapter, to determine the printer failure.

Power-On Self Test (POST) sequence

Press the **Power** button to turn machine on.

- The Power, Copy, Scan, and Fax indicator lights turn on.
- The Charge-Coupled Device (CCD) moves to the right, and then to the left.
- The paper feed motor runs then stops.
- The carrier moves and then returns to the maintenance station.
- The **Power** and **Copy** buttons stay on.
- The following message is displayed on the LCD.
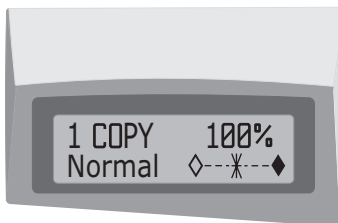
If your printer completes POST with no errors, go to the **"Symptom tables" on page 2-3**, locate the symptom and take the indicated action.

If your printer does not complete POST, locate the symptom in the following table and take the indicated action.

POST symptom table

Symptom	Action
No Power, Copy, Fax, or Scan lights and no motors run.	Go to the **"Power service check" on page 2-13**. If okay, go to the **"Control panel problems" on page 2-3**.
Paper feed gears do not turn	Go to the **"Paper Feed service check" on page 2-10**.
Carrier does not move	Go to the **"Carrier Transport service check" on page 2-6**.
Carrier slams side frame	Go to the **"Carrier Transport service check" on page 2-6**.
CCD does not move	Go to the **"Maintenance Station service check" on page 2-9**.
CCD lamp does not turn on	Go to the **"CCD Module Assembly service check" on page 2-8**.
LCD displays "Unlock Scanner"	Go to the **"CCD Module Assembly service check" on page 2-8**.

Symptom tables

Locate the symptom in the following tables and take the appropriate action.

Carrier transport problems

Symptom	Action
• No carrier movement • Slow carrier movement • Carrier stops • Carrier slams side frame	Go to the **"Carrier Transport service check" on page 2-6**.

Maintenance station problems

Symptom	Action
Maintenance station: • Fails to cap the printheads • Fails to clean the printheads	Go to the **"Maintenance Station service check" on page 2-9**.

Control panel problems

Symptom	Action
• Buttons do not work • LCD does not display	Check control panel cable connection at J4 on the system board. Then run the **"Power-On Self Test (POST) sequence" on page 2-1**. If the LED buttons or any lights fail, check connection J4. If the problem remains, replace the scanner assembly. Go to the **"Scanner and ADF assembly removal" on page 4-12**. If the problem still exists, replace the system board. Go to the **"System board removal" on page 4-15**.

Printer communication table

Symptom	Action
• Not able to print Test Page	Check the USB cable and system board cable connections. If okay, replace system board. Go to the **"System board removal" on page 4-15**.

Scanner problems

Symptom	Action
• CCD does not move • Lamp does not light	Go to the **"CCD Module Assembly service check" on page 2-8**.
• Control panel displays "Unlock Scanner"	To unlock the scanner, press the scanner lock located under the scanner assembly.
• Scanned images are: faded, or colors are dull, blurry or fuzzy. Images are slanted or crooked and the strait lines in the image appear to be jagged or uneven. • Blank copies	Go to the **"Scan/Copy Quality service check" on page 2-16**.

Paper feed problems

Symptom	Action
• Fails to pick paper • Picks more than one sheet of paper • Picks paper but fails to feed • Paper jams • Paper fails to exit • Noisy paper feed	Go to the **"Paper Feed service check" on page 2-10**.
Envelopes fail to feed	Go to the **"Paper Feed service check" on page 2-10**.
Paper skews	Go to the **"Paper Path service check" on page 2-12**.

Power problems

Symptom	Action
No power in machine, motors do not operate	Go to the **"Power service check" on page 2-13**.

Print quality problems

Symptom	Action
• Voids in characters • Light print • Prints off the page • Fuzzy print • Carrier moves but no print • Printhead dries prematurely • Colors print incorrectly • Vertical alignment off	Go to the **"Print Quality service check" on page 2-14**.
• Ink smearing • Vertical streaks on paper • Print lines crowded	Go to the **"Paper Feed service check" on page 2-10**.

Service checks

Carrier Transport service check

	FRU	Action
1	System Board Carrier Transport Motor	Check the transport carrier motor connector JP7. If connected, check for approximately 30 volts on pins 1 and 2 or at the wire connections located on the rear of the transport carrier motor. If voltage is incorrect, replace the system board. If voltage is correct, check the motor for shorts. If motor needs replacing, replace the print engine. Go to **"Print engine removal" on page 4-12**.
2	Carrier Transport Motor	Check the motor for binds, or loose motor pulley. A noisy or chattering motor or a motor that fails to turn can be caused by: • An open or short in the motor. • An open or short in the motor driver on the system board. • A bind in the carrier transport mechanism. With the carrier transport motor cable (JP7) disconnected from the system board, check for 0 to 10 ohms between the following pins on the motor: JP7-1 and JP7-2 If the readings are incorrect, replace the print engine. Go to the **"Print engine removal" on page 4-12**.
3	Carrier Guide Rod	Clean the carrier rod. **Note**: Lubricate the rod and the carrier rod bearing surfaces with grease P/N 99A0394.

	FRU	Action
4	Encoder Strip Carrier Assembly	Check the encoder strip for proper installation. Also, check it for wear, dirt, and grease. Be sure all printhead connectors are fully seated. Check the cables for damage. If the encoder strip and all connections are okay, but the carrier still slams the side frame, replace the print engine. Go to the **"Print engine removal" on page 4-12**.
5	Carrier Transport Belt Idler Pulley Parts Carrier Frame	Check for worn, loose or broken parts. Check for obstructions blocking carrier movement. Check the carrier belt idler pulley mounting screw. Loosen the screw and allow the tension spring to take up any slack in the belt. Tighten the screw. If the pulley mounting bracket has reached the stop, replace the carrier assembly. Go to the **"Loosen carrier belt tensioner screw (A)." on page 4-6**. Lubricate carrier to carrier frame engagement with grease P/N 99A0394.
6	Printhead Carrier Assembly	Disconnect the printer and check the carrier printhead connectors JP1 and JP2. If the connections are good, remove the printhead carrier and check the cable connection to the home sensor board. If the problem remains, replace the system board. Go to the **"System board removal" on page 4-15**.
7	Maintenance Station	A problem with the maintenance station can cause carrier movement problems at the right margin. Go to the **"Maintenance station removal" on page 4-9**.

CCD Module Assembly service check

The CCD (charge-coupled device) Module does not move during POST Test.

The CCD lamp does not come on when CCD module assembly moves.

The CCD LCD displays "Unlock Scanner."

	FRU	Action
1	CCD Module Assembly	If CCD module does not move, go to the **"Maintenance Station service check" on page 2-9**.
		If lamp does not come on as CCD module assembly is scanning or moving, check connector (JP9) on the system board. If connected and the lamp still does not work, replace the control panel scanner assembly. If the problem persists, replace the system board. Go to **"System board removal" on page 4-15** for more information.
		To unlock scanner, press the red lever down.
		Note: Unlock scanner before use.

Maintenance Station service check

The maintenance station has three functions:

1. Wipes the printhead nozzles to clean them of dirt.
2. Provides a place for printheads to fire all nozzles, keeping them clear prior to printing.
3. Seals the printhead when it is not being used to prevent the nozzles from drying.

	FRU	Action
1	Maintenance Station Assembly	As the carrier moves to the left over the maintenance station, a slot on the bottom of the carrier engages a tab on the sled of the maintenance station causing the cap to rise and seal the printhead. Carrier movement to the right uncaps the printhead. The wiper cleans the printhead nozzles as the carrier leaves the maintenance station. The wiper cleans the printhead only when the carrier is moving to the left. There should be no wiping action of the printhead nozzles when the carrier is moving to the right. After the cleaning operation is complete, a tab on the maintenance station engages a tab on the carrier, causing the wiper to lower.
		Check the maintenance station for worn or broken parts. Replace if needed. Go to the **"Maintenance station removal" on page 4-9**.
		Worn wipers cause degraded print quality just after a maintenance cleaning. Check for loose or worn wipers.
		Worn caps cause the printhead nozzles to dry and clog. Check for loose or worn caps.

Paper Feed service check

If your machine does not have paper jam problems, continue with the service check. If your machine does have a paper jam problem, examine it for the following before you begin the service check:

- Check the entire paper path for obstructions.
- Be sure there is not too much paper in the sheet feeder.
- Be sure the correct type of paper is being used.
- Check for static in the paper.

	FRU	Action
1	System Board	Run the **"Power-On Self Test (POST) sequence" on page 2-1**. Replace parts as needed. To check the paper feed motor, disconnect the paper feed connector JP5 and check for approximately 5 ohms between pins: 1 and 2 3 and 4 If the reading is incorrect, replace the print engine. Go to the **"Print engine removal" on page 4-12**. If the reading is correct, replace the system board. Go to the **"System board removal" on page 4-15**.

	FRU	Action
2	Paper Feed Motor	A noisy or chattering motor or a motor that fails to turn, can be caused by: • An open or short in the motor • An open or short in the motor driver on the system board • A bind in the paper feed mechanism With the paper feed motor cable JP5 disconnected from the system board, check for approximately 5 ohms between the following pins on the motor: 1 and 2 3 and 4 If the readings are incorrect, replace the print engine. Go to the **"Print engine removal" on page 4-12**. Although the paper feeds in a forward direction only, the paper feed motor turns in two directions. If the paper feed motor turns in one direction only, replace the system board. Go to the **"System board removal" on page 4-15**. Binds in the paper feed motor or gear train can cause intermittent false paper jam errors. Remove the paper feed motor and check the shaft for binds. Also check for a loose or worn motor gear.
3	Auto Sheet Feeder Assembly	Check the pick roller for wear.
4	Mid Frame Assembly	Check the following for wear: • Small Feed rollers • Large Feed roller • Exit roller • Star rollers If the mid frame assembly needs to be replaced, go to the **"Print engine removal" on page 4-12** and replace print engine.
5	End-of-Forms Flag and Spring	Check for binds or damage.

Paper Path service check

Examine the machine for the following before you begin this service check:

- Check the entire paper path for obstructions.
- Be sure the correct type of paper is being used.
- Be sure the printer is installed on a flat surface.

	FRU	Action
1	Large and Small Feed Rollers	Check for wear and binds.
2	Small Feed Roller Springs	Check for damage.
3	Auto Sheet Feeder Assembly	Check the pick roller for wear.
4	Mid Frame Asm	Check the following for wear: • Exit roller • Star rollers
5	End-of-Forms Flag	Check for binds or damage.

Note: If any of these items are damaged or defective, replace the print engine. Go to **"Print engine removal" on page 4-12**.

Power service check

	FRU	Action
1	External Power Supply	Plug the external power supply into an outlet. Check for + 30 V dc. If voltage is incorrect, replace the power supply.
2	Printhead Cable Paper Feed Motor Carrier Transport Motor Control Panel	Unplug the printer. Check all connections and plug in the printer. Look for a symptom change. Check the failing part for shorts and replace as necessary.
3	System Board	If the symptom has not changed, replace the system board. Go to the **"System board removal" on page 4-15**.

Print Quality service check

	FRU / Function	Action
1	Printhead Cartridge	Be sure the machine contains good print cartridges.
2	Color Printhead Cartridge Cross Contamination	Cross contamination of color inks results in incorrect colors printed, as when green prints for yellow, (when yellow and blue are mixed in the printhead cartridge). This problem resolves quickly as the printhead cartridge is used. If cross contamination occurs, check the following: • The maintenance station wiper for damage. • The printhead nozzle plate was resealed with tape.
3	Printhead Carrier Assembly	Reseat the printhead cables in the system board and check the following parts for wear or damage: • Printhead Cartridge Latch • Latch Spring • Carrier
4	System Board Printhead Carrier Assembly	Perform the **"Test page" on page 3-1**. Look for a break in the diagonal line of the nozzle test pattern. A broken line indicates one or more print nozzles are not working. Run the test again to verify the failure. Check the gold-plated contacts on the end of the printhead carrier cable for dirt, wear and damage. Use only a clean dry cloth to clean the contacts. If the symptom remains, replace the system board. Go to the **"System board removal" on page 4-15**.
5	Maintenance Station	Intermittent nozzle failures can be caused by worn parts in the maintenance station. Go to the **"Maintenance station removal" on page 4-9**, and then return to this check.

|	FRU / Function	Action
6	Paper Feed	Ink smudging and smearing can be caused by paper problems or problems in the paper feed area. Check the following: • Correct type of paper is being used. Also check the paper for curl or wrinkles. • Feed rollers for wear, dirt, or looseness. • Gears for wear or binds. • Paper path for obstructions.
7	Carrier Transport	Blurred print and voids can be caused by problems in the carrier transport area. Check the following: • Carrier transport belt for wear. • Carrier guide rod for wear or dirt. If dirty, clean and lubricate. • Carrier to carrier frame engagement should be lubricated with grease P/N 99A0394. • Idler pulley parts for wear, damage, or looseness.
8	Alignment	Uneven vertical lines can be adjusted by performing the printhead alignment adjustments. The user is directed, through the Lexmark Solution Center to perform the printhead alignment adjustments, when replacing a printhead cartridge.

Scan/Copy Quality service check

	FRU / Function	Action
1	Scanned images are: faded, or colors are dull, blurry or fuzzy. Images are slanted or crooked and the strait lines in the image appear to be jagged or uneven.	Check the lighter/darker settings to see if it is correct. There are two ways to make the adjustment: • From the control panel • From the Lexmark Solution Center Check to see if there is any dust, debris on the glass. This may cause a poor image. Check the press plate on the scan lid for any dust or debris.
2	Blank copies.	If blank copies found, make sure that the original document is facing down on the scanner bed. Check the print cartridges to see if they need to be cleaned or replaced. Check the paper type and copy quality settings on the control panel or Lexmark Solution Center.

3. Diagnostic aids

Test page

This test prints the test page.

To run a complete test page of black and color patterns, be sure the printhead cartridges are in good condition.

To enter the test:

1. Turn the printer on.
2. Lift the scanner unit.
3. Install a known good black print cartridge in the left side of the carrier and a good color cartridge in the right.
4. Close the scanner unit.
5. Load paper in the paper support.
6. Press the **Options** button until "Maintenance" appears.
7. Press the right arrow to self test.
8. Press the **Select** button and the test runs.

The printer prints four lines of black and color printhead cartridge nozzle purge patterns followed by a black and color nozzle test pattern. The purge pattern is used to clear all printhead nozzles. The nozzle test pattern prints all nozzles on a diagonal line. There should be no breaks in the nozzle test pattern. A break in the pattern indicates one or more nozzles are not working.

If a print quality problem exists, see **"Print Quality service check" on page 2-14**.

4. Repair information

This chapter explains how to make adjustments to the printer and how to remove defective parts.

Note: Read the following before handling electronic parts.

Handling ESD-sensitive parts

Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To prevent damage to ESD-sensitive parts, follow the instructions below in addition to all the usual precautions, such as turning off power before removing system board:

- Keep the ESD-sensitive part in its original shipping container (a special "ESD bag") until you are ready to install the part into the machine.
- Make the least-possible movements with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This discharges any static electricity in your body to the machine.
- Hold the ESD-sensitive part by its edge connector shroud (cover); do not touch its pins. If you are removing a pluggable module, use the correct tool.
- Do not place the ESD-sensitive part on the machine cover or on a metal table; if you need to put down the ESD-sensitive part for any reason, first put it into its special bag.
- Machine covers and metal tables are electrical grounds. They increase the risk of damage because they make a discharge path from your body through the ESD-sensitive part. (Large metal objects can be discharge paths without being grounded.)
- Prevent ESD-sensitive parts from being accidentally touched by other personnel. Install machine covers when you are not working on the machine, and do not put unprotected ESD-sensitive parts on a table.
- If possible, keep all ESD-sensitive parts in a grounded metal cabinet (case).
- Be extra careful in working with ESD-sensitive parts when cold weather heating is used because low humidity increases static electricity.

Adjustments

The user is directed, in the Lexmark Solution Center, to perform the printhead alignment adjustments after replacing a print cartridge.

Removal procedures

The following procedures are arranged according to the name of the printer part discussed.

CAUTION: Unplug the power cord before removing any parts.

Releasing plastic latches

Many of the parts are held in place with plastic latches. The latches break easily; release them carefully. To remove such parts, press the hook end of the latch away from the part to which it is latched.

Hook

Never apply excessive force when releasing the hook.
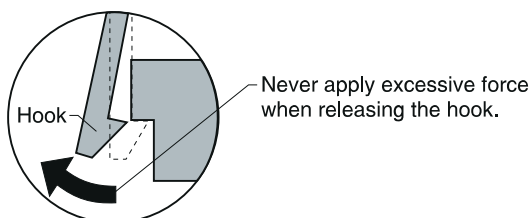
Print engine cover removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove print engine.
4. Remove four screws (A).

A
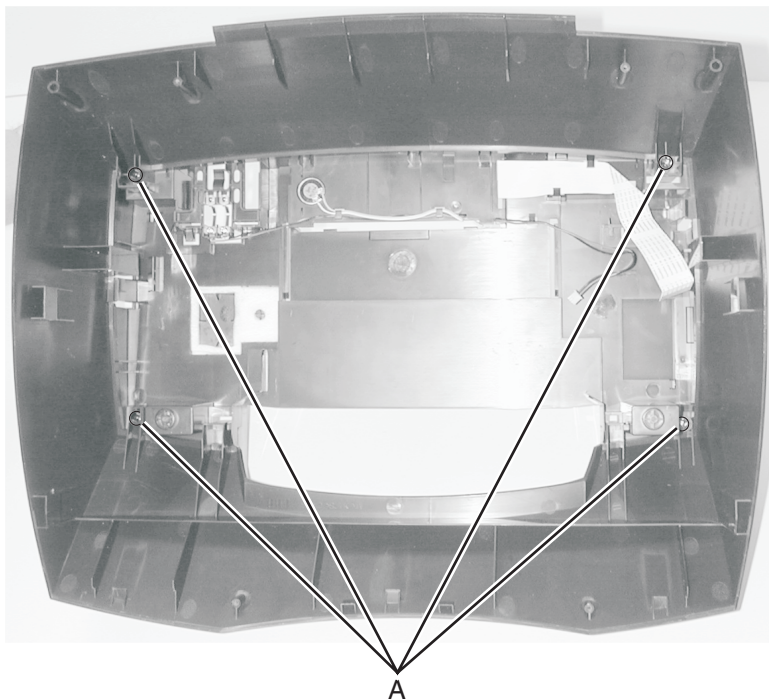
5. Depress six latches (B).

B
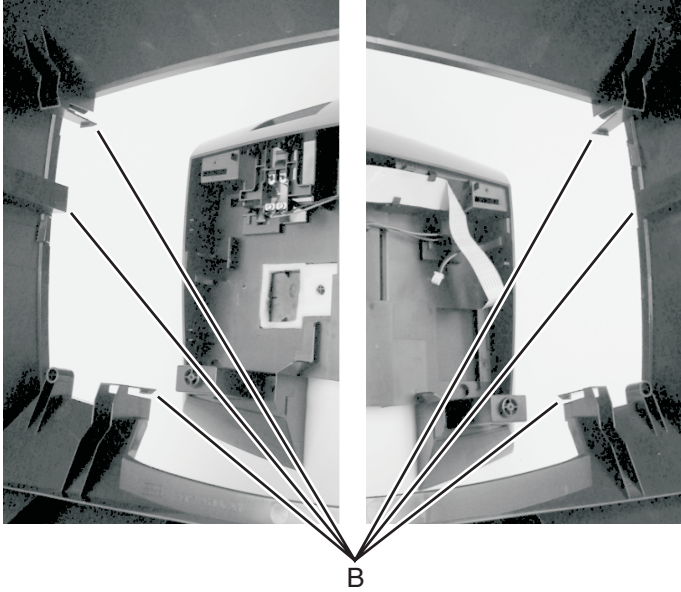
6. Remove print engine cover.

ASF removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove print engine.

4. Disconnect media sensor (A).

A
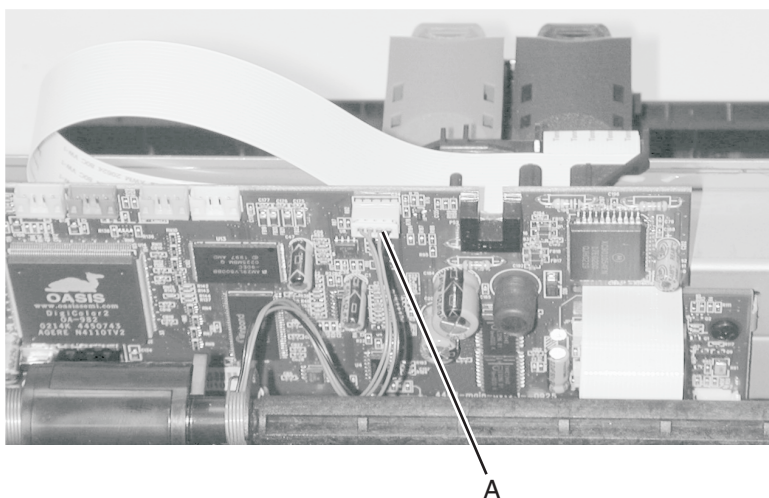
5. Remove four screws (B) from ASF.

B
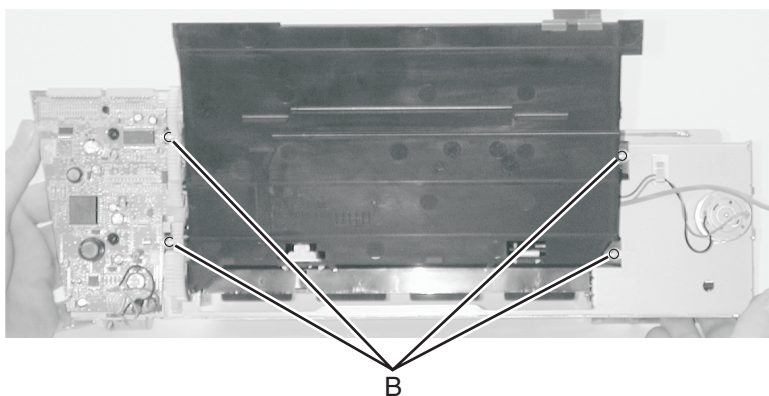
6. Remove ASF.

Base assembly removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove print engine.
4. Remove print engine cover from base assembly.

Carrier removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove midframe.
4. Remove print engine.
5. Disconnect carrier cables from system board.
6. Loosen carrier belt tensioner screw (A).

A
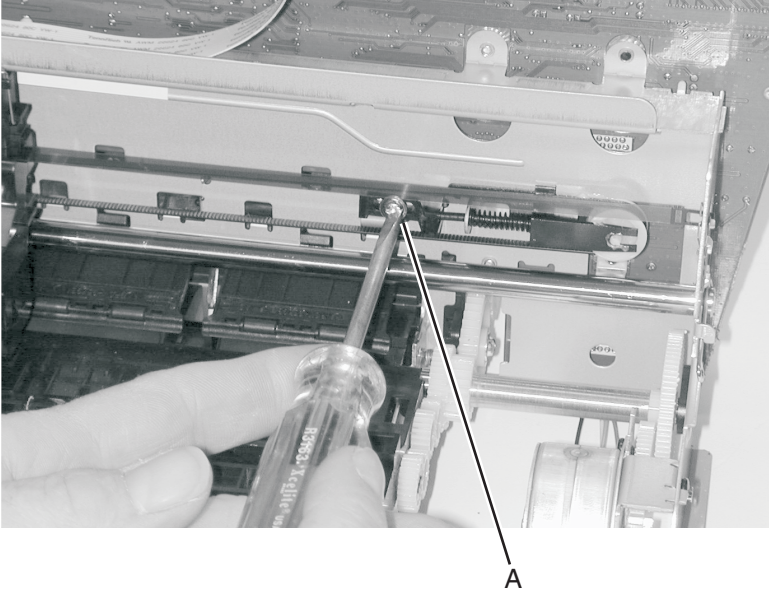
7. Depress carrier belt tensioner (B).
8. Remove carrier belt from motor pulley (C).
9. Remove two retainer clips (D) from the carrier shaft.

D   C   B   D
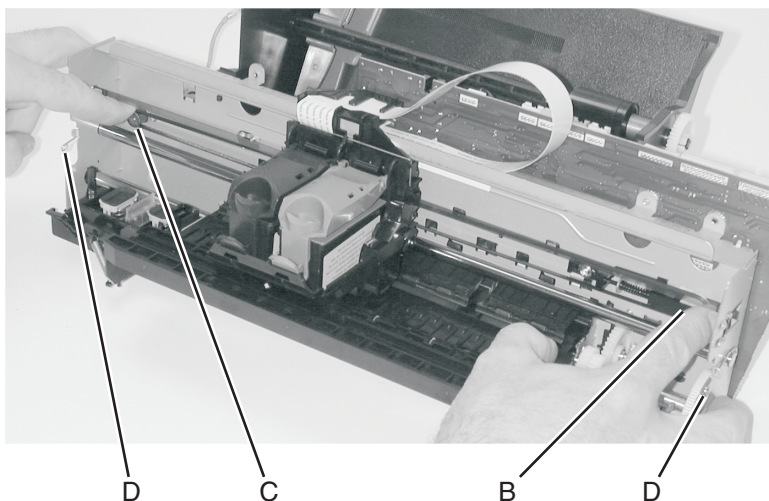
10. Remove shaft.
11. Lift and remove carrier.
Note: Position of encoder strip.

Fax card removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove print engine.
4. Remove exit tray.

5. Remove fax card cover (A).

A
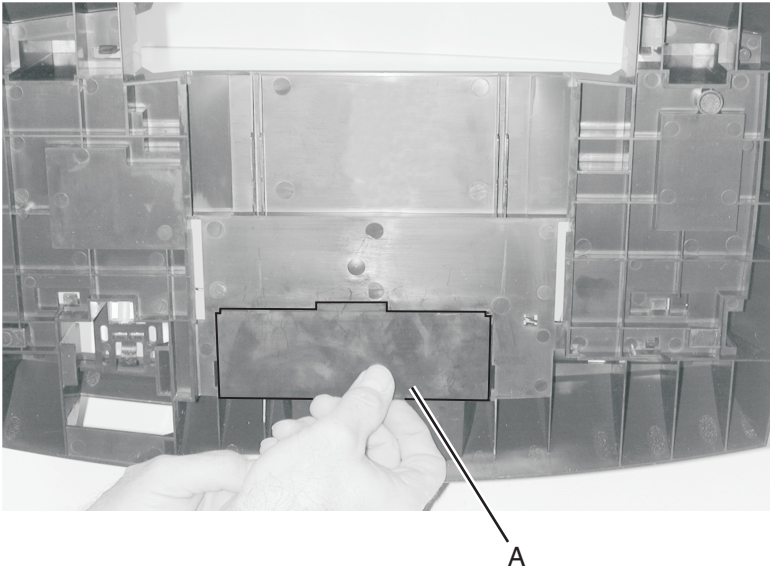
6. Remove three fax card screws (B).

B
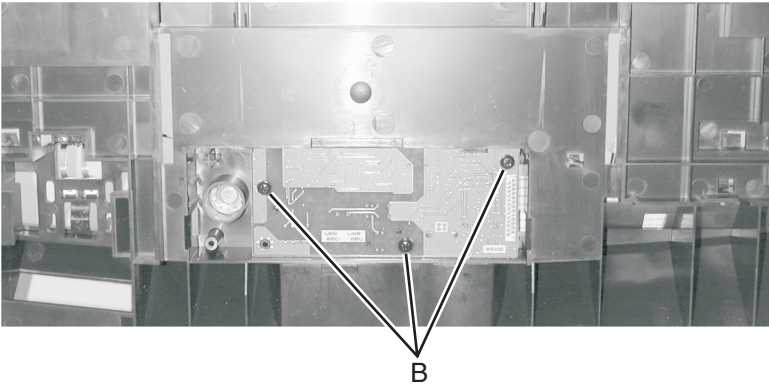
7. Remove fax card.

Note: Routing of all cables.

Maintenance station removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove print engine.
4. Use a screwdriver to unlatch maintenance station (A).

A
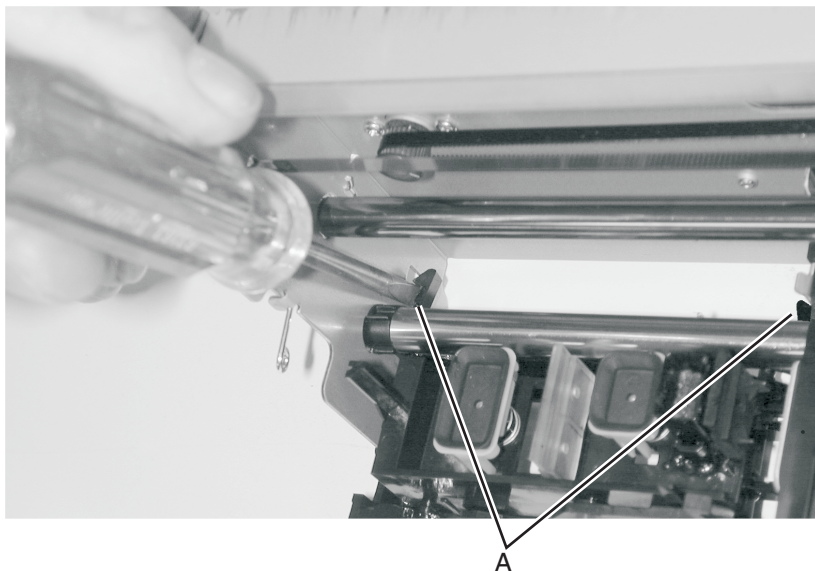
5. Slide maintenance station forward and remove.
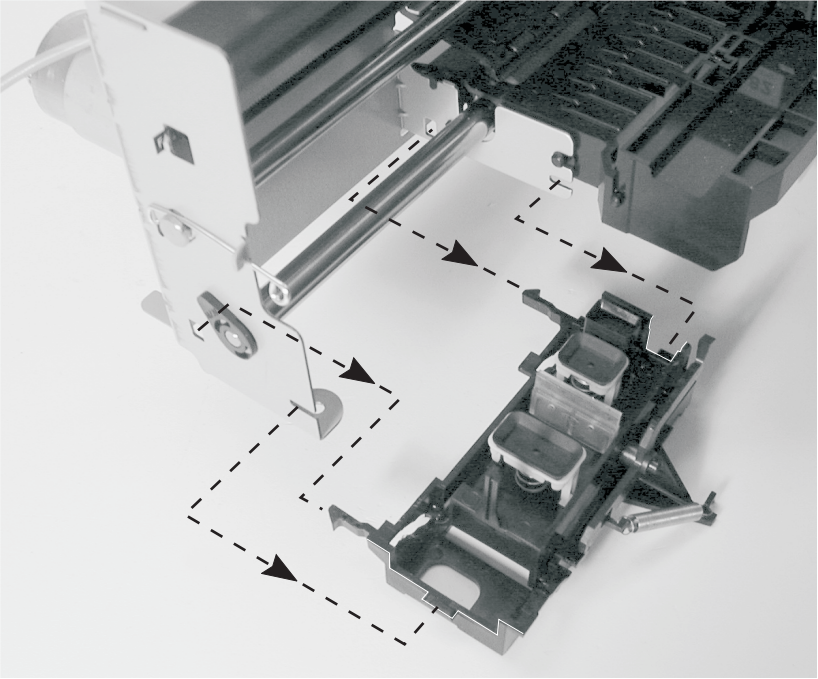
Midframe removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove six screws (A) from midframe.

A
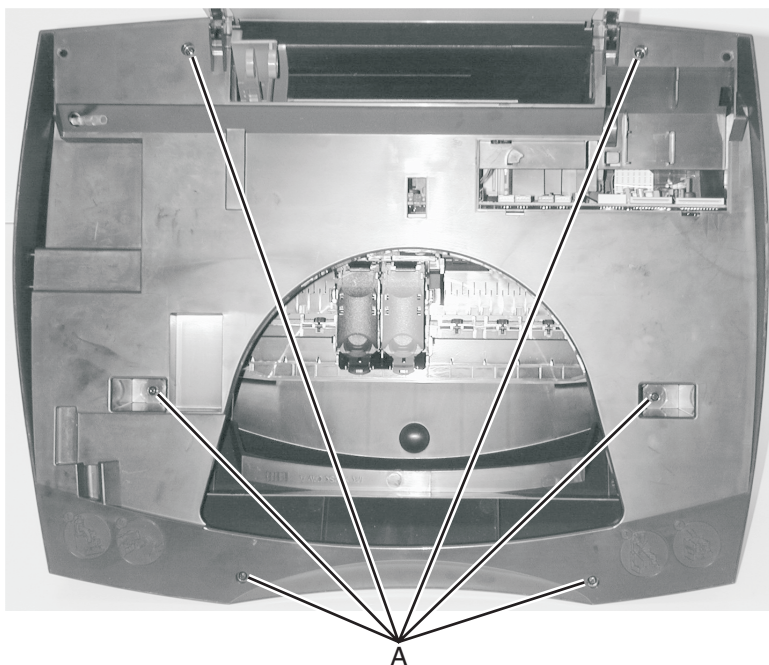
4. Use screwdriver to unlatch midframe.

Tabs
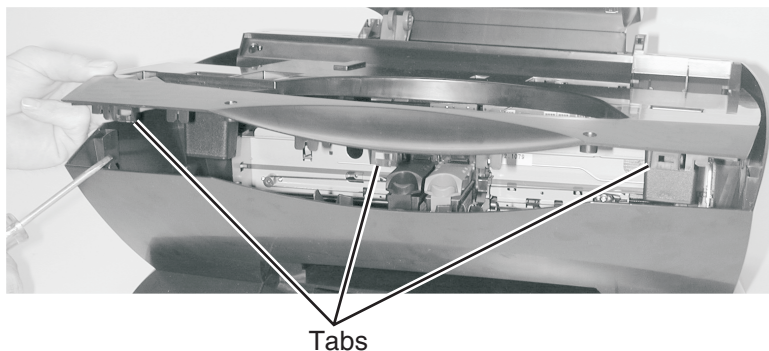
5. Remove midframe.

Print engine removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove midframe.
4. Move the carrier to the center of the printer.
5. Remove two screws (A) from print engine.
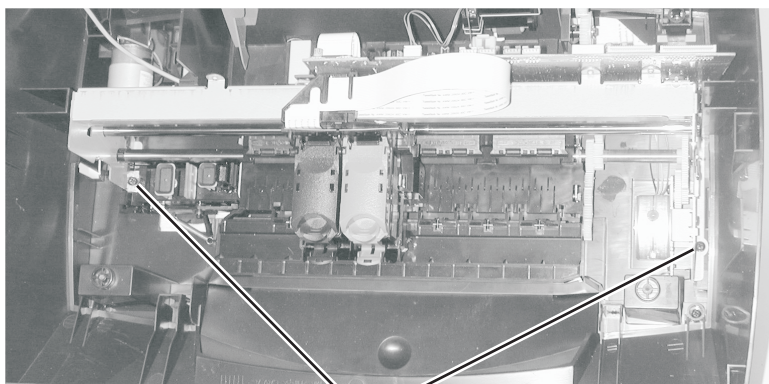
6. Disconnect cables from system board.
7. LIft and remove print engine.

Scanner lid assembly removal

1. Open the lid.
2. Lift and remove.

Scanner and ADF assembly removal

1. Remove scanner lid.
2. Lift scanner assembly.

3. With screwdriver depress two clips (A) on cable cover and remove.

A
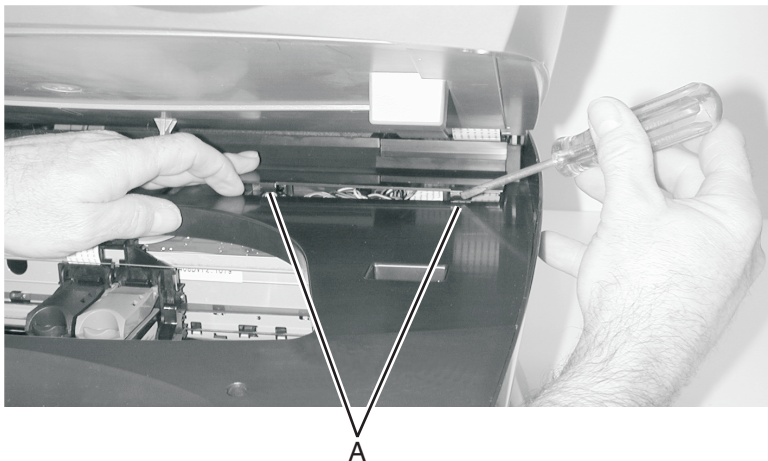
4. Depress clip (B) on left side of scanner assembly.
5. Depress clip (C) on right side of scanner assembly.

B   C
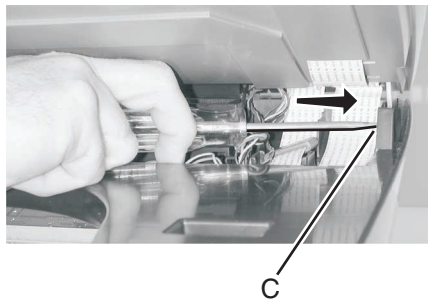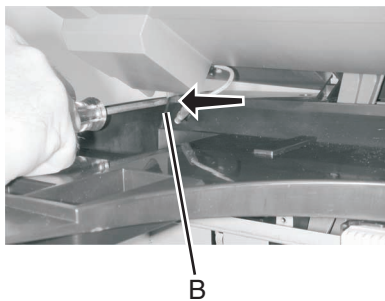
6. Disconnect all cables (D) from system board.

D
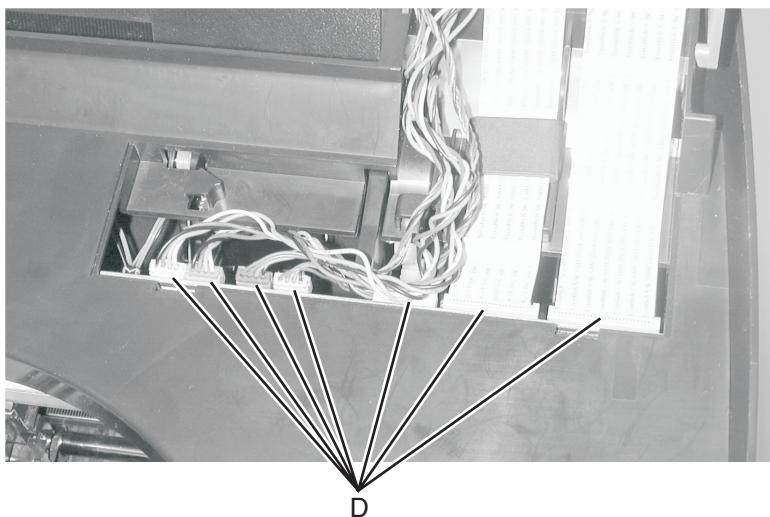
7. Disconnect ground cable (E).

E
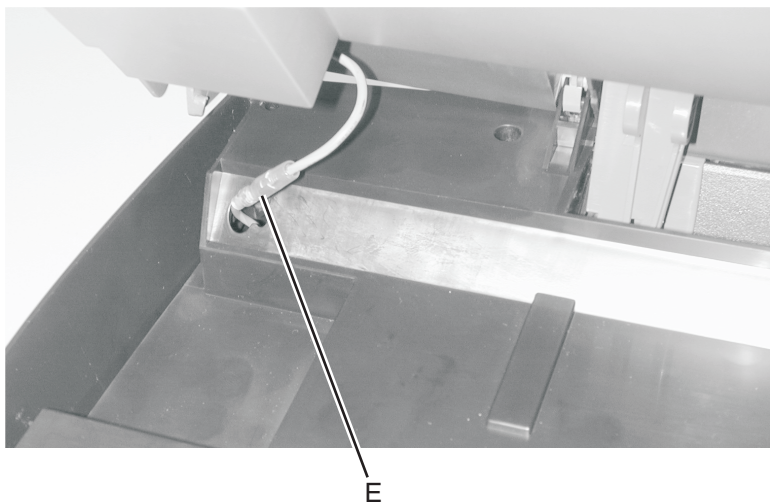
8. Lift and remove scanner and ADF assembly.

Note: Routing of all cables.

Note: Do not lubricate scanner rod or bearing after replacing.

System board removal

1. Remove scanner lid.
2. Remove scanner assembly.
3. Remove print engine.
4. Remove ASF.
5. Disconnect all cables from system board.
6. Remove three screws (A) from system board.
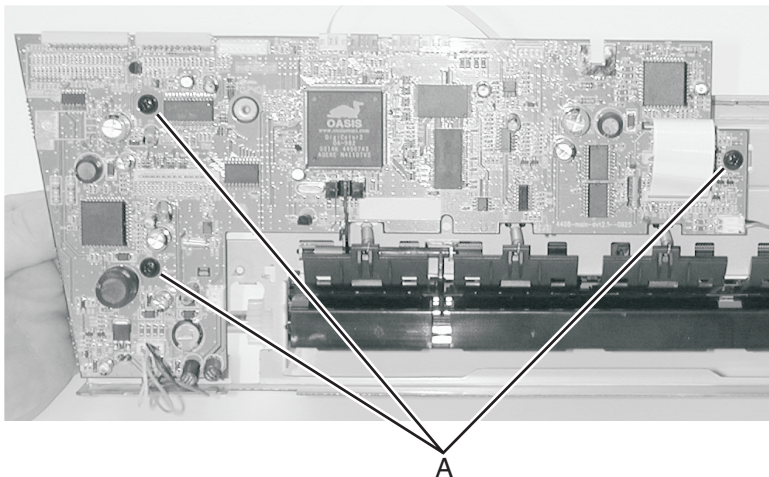
7. Remove system board.

5. Connector locations
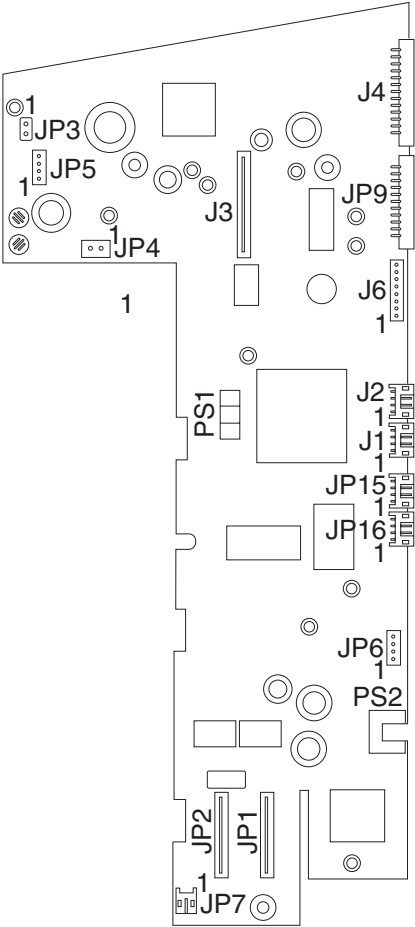
Units	Description
J1	ADF Entry Sensor
J2	ADF Exit Sensor
J3	USB and Phone Jacks
J4	Control Panel
JP1	Carrier

JP2	Carrier
JP3	Jumper
JP4	Power Supply Terminal
JP5	Paper Feed Motor
JP6	Media Sensor
JP7	Transport Carrier Motor
JP9	CCD Module
JP15	ADF Paper Feed Motor
JP16	CCD Module Scanner Motor
PS2	Scanner Housing Sensor
S1	EOF
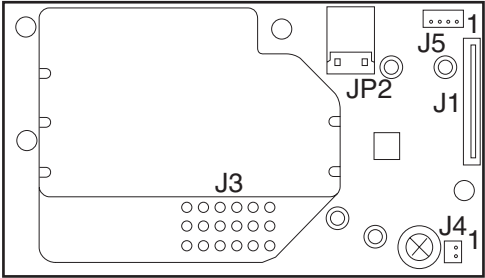
Units	Description
J1	USB and Phone Jacks
J4	Fax Speaker
JP2	USB

6. Preventive maintenance

This chapter contains the lubrication specifications. Follow these recommendations to prevent problems and maintain optimum performance.

Lubrication specifications

Lubricate only when parts are replaced or as needed, not on a scheduled basis. Use grease P/N 99A0394 to lubricate the following:

- All gear mounting studs.
- The left and right ends of the large feed roller at the side frames.
- The carrier to carrier frame engagement.
- The carrier guide rod, and carrier guide rod bearings.

Warning: Keep grease from coming into contact with any electrical components, may cause printer damage or failure. Do not lubricate the scanner rod or bearing after replacing.

7. Parts catalog

How to use this parts catalog

- SIMILAR ASSEMBLIES: If two assemblies contain a majority of identical parts, they are shown on the same list. Common parts are shown by one index number. Parts peculiar to one or the other of the assemblies are listed separately and identified by description.
- NS: (Not Shown) in the Asm-Index column indicates that the part is procurable but is not pictured in the illustration.
- PP: in the parts description column indicates the part is available in the listed parts packet.
- NA: Not available as a FRU.

Assembly 1: Covers
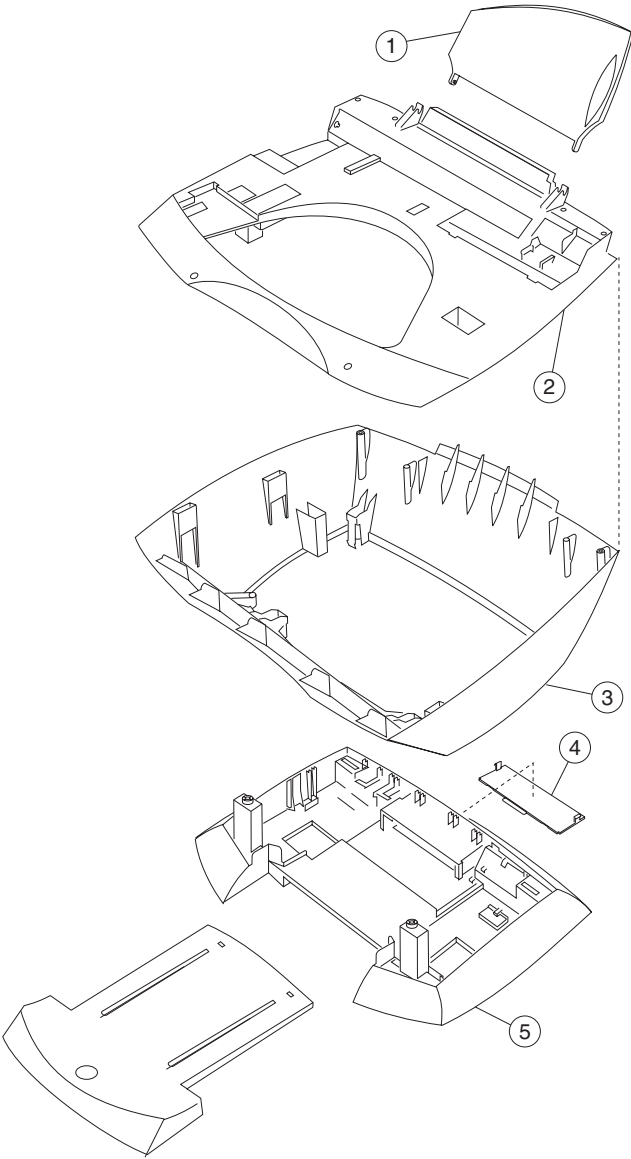
Assembly 1: Covers

Asm-Index	Part Number	Units	Description
1-1	56P1778	1	Paper support
3	56P1783	1	Engine cover
2	56P1784	1	Midframe cover
4	56P1786	1	Fax cover
5	56P1781	1	Base assembly
NS	7371533	1	Plain package B/M includes: carton, cushion set, and sealing tape (001)
NS	7371538	1	Plain package B/M includes: carton, cushion set, and sealing tape (002)

Assembly 1 (cont.): Covers
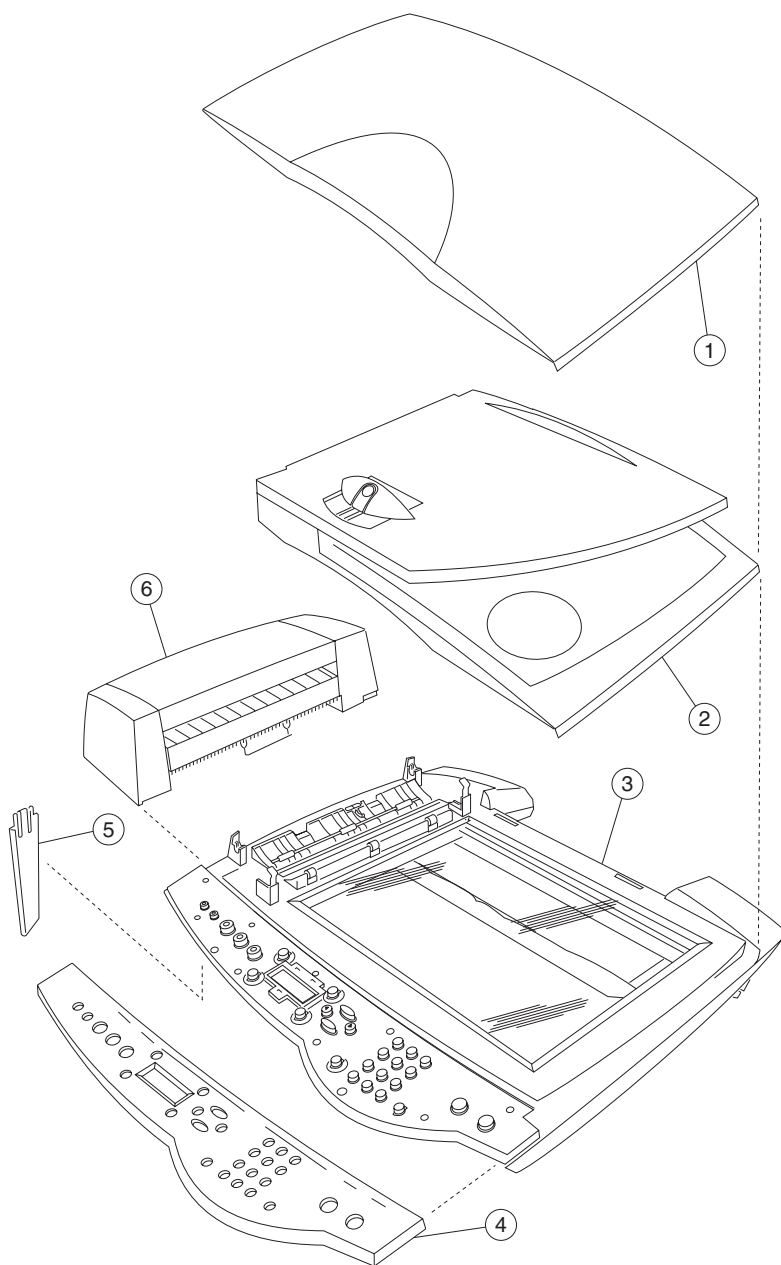
Assembly 1: (cont.) Covers

Asm-Index	Part Number	Units	Description
1-1	56P1780	1	Scanner lid assembly (002)
2	56P1779	1	Scanner lid assembly (001)
3	56P1776	1	Control panel scanner assembly (001)
4	15K0153	1	Cover, control panel, English
5	56P1785	1	Scanner support
6	56P1774	1	ADF Module
NS	56P1777	1	Control panel scanner assembly (002)
NS	56P1789	1	Control panel scanner assebmly (AK1)
NS	56P1790	1	Control panel scanner assembly (AK2)
NS	15K0154	1	Cover, control panel, French
NS	15K0155	1	Cover, control panel, Germany
NS	15K0156	1	Cover, control panel, Spain
NS	15K0157	1	Cover, control panel, Italy
NS	15K0158	1	Cover, control panel, Dutch
NS	15K0159	1	Cover, control panel, Portuguese (Brazil)
NS	15K0160	1	Cover, control panel, Polish
NS	15K0161	1	Cover, control panel, Japanese
NS	15K0162	1	Cover, control panel, Simple Chinese
NS	15K0163	1	Cover, control panel, Traditional Chinese
NS	15K0164	1	Cover, control panel, Russian
NS	15K0167	1	Cover, control panel, Greek

Assembly 2: Paper feed, frame, and carrier transport
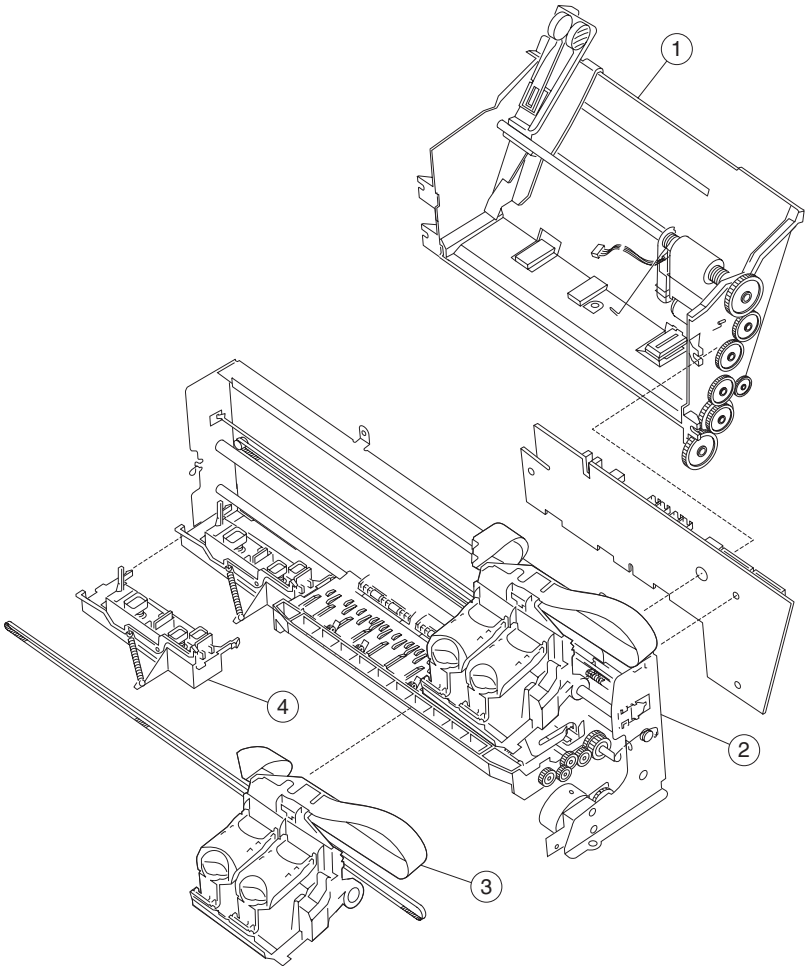
Assembly 2: Paper feed, frame, and carrier transport

Asm-Index	Part Number	Units	Description
2-1	56P1774	1	ASF module
2	56P1770	1	Printing engine
3	56P1773	1	Carrier w/cable assembly
4	56P1788	1	Maintenance station assembly

Assembly 3: Electronics
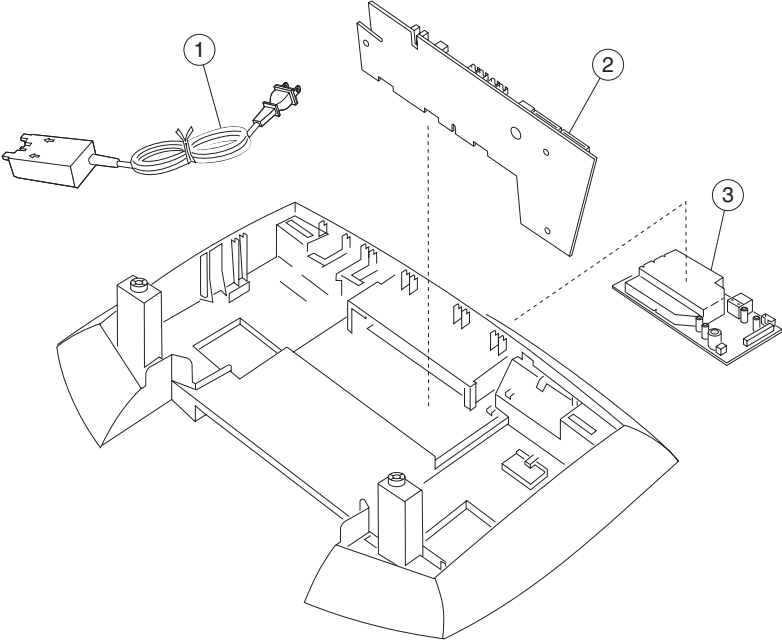
Assembly 3: Electronics

Asm-Index	Part Number	Units	Description
3-1	13D0400	1	Power supply (LV) 120 V
2	56P1771	1	Board, system (001)
3	56P1787	1	Fax card
NS	56P1772	1	Board, system (002)
NS	13D0401	1	Power supply (HV) 220 V
NS	13D0402	1	Power supply – Japan 100 V

Index

4408-00X

T

Part Numbers

Font List
Arial @ 10.0 pt X-2
Arial @ 9.0 pt 2-2–2-6, 2-8–2-10, 2-12–2-13, 5-1–5-2
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Helvetica @ 11.0 pt iii–X-2
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Graphics List